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FOUNDED BY WILLIAM HUNTING, F.R.C.V.S.

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UNQUALIFIED PRACTICE.

At the last Council meeting the President stated that financial reasons are now forcing the Council to abstain from all but the most imperatively necessary prosecutions. In other words, some men who could be and ought to be prosecuted are not proceeded against. Regrettable as this is, it is not the most serious difficulty confronting us in connection with unqualified practice. We all know that a great deal of unqualified practice against which the Council has no legal power to act can be and is being carried on. Perhaps everyone does not realise how greatly unqualified practice as a whole, including the latter unassailable form, is likely to increase.

At present, the paucity of veterinary surgeons in civil life has naturally led to an increase in unqualified practice. For the moment this does not seem serious; for most of the few qualified men still in civil practice have more than enough to do. It will become serious when a good many veterinary surgeons now in the army are set free, and are trying to re-establish themselves in practice. In addition, it is more than possible that the existing unqualified opposition will then be seriously reinforced from another quarter.

It is probable that some at least of the N.C.O's and men of the A.V.C. will attempt unqualified practice; it is possible that a great many may do so. Those who do, if they are men of even average capacity, are likely to prove formidable opponents. All of them will have had Army training in practical veterinary work; and many will have had considerable experience of both injuries and disease. The more educated and intelligent amongst them will probably be more dangerous opponents than the old registered men, some of whom, despite their lack of college training, were by no means to be despised as clinicians.

Taking these factors together, it is easy to see that the question may become more flagrant than it ever has been. It will then be recognised as imperative that the Council be supplied with funds to act against so much of it as can legally be stopped. Surely the same thing ought to be regarded as essential now. When we realise how greatly unqualified practice is likely to increase, and remember how much of it will always be within the law, we should not allow its illegal forms to gain a footing at all. The Council are ready to do all they can against the latter; but the profession must first provide the funds to do it.

STRUCK BY LIGHTNING.

These cases are not infrequent incidents in country practice, and their explanation is not quite so easy as it sometimes appears.

Some time in last autumn a farmer client called upon me and said: "I had a heifer killed by lightning yesterday afternoon, and I want you to give me a certificate to that effect, and then I can claim from the Insurance Company."

This appeared to be a very convenient arrangement to the owner of the animal. My reply was: "I must first see the carcase and, if necessary, make a microscopical examination of the blood, and get some notes of the facts connected with the case." One thing I had to make sure of—had there been lightning recently in the district?

I visited the farm about noon next day—I could not attend before. The animal had been dead about forty-eight hours when I saw it. I found it in a field lying on its side with the fore-legs turned back under, the head protruding, rigid, no discharge of blood from the nose or rectum.

The udder—it was a first time heifer in calf, small, and pale pink in colour (in anthrax this is usually of a bluish-red colour), rather angry-looking, a little froth from the mouth, body a little tympanitic. It was lying close to a ditch, and there were signs of the soil having been disturbed just round the spot where the carcase lay. In the same field there were ten others, and near by was a large beech tree shadowing that part of the field.

The weather was very hot with bright sunshine, and had been so for several days. On the afternoon and night prior to the animal being found dead there had been a very violent display of lightning. Sheet lightning, very vivid and constantly repeated throughout the night. The suggested cause of death seemed feasible.

There were conditions that indicated possibly Anthrax, Malignant œdema, Yew poisoning, or Enteritis. I could not detect any anthrax bacilli in the blood from the ear, and when I made a post-mortem examination afterwards, the spleen was normal. The rumen was free from yew or any that could be called poisonous vegetable matter. The carcase on the whole presented conditions similar to those exhibited in inflammatory œdema or atypical quarter-ill.

After obtaining all the evidence from the autopsy and the history of the case, I gave a certificate that the animal was struck by lightning which had caused its death. There was no other death at the farm, nor did any of the other ten show illness. I acted for both the owner and the Insurance Com-

pany. The Company thanked me for my report, and paid the claim without demur.

When animals are killed by lightning, frequently the posture of the dead animal is the most remarkable feature.

The first case I met with, in 1869, was that of twenty sheep killed. They were all right before the storm; they were found dead after the storm. They were in different postures—some on their sides, some on their backs, some kneeling, some kneeling on one leg, others apparently feeding; no marks of fire on any of them; no tree very near. The Insurance Office, whilst not admitting liability, paid as an indemnity the sum of £3 a sheep to the owner. From this date other offices did likewise, and now it is a regular item included in a farm policy against loss of animal life as a result of fire.

In one case a horse was out in a thunderstorm in a carriage, one of a pair. The lightning played round, the horse became very excited, and could be held only with great difficulty. It reached the stable yard, but, on being taken out of harness and put into the box, dropped dead.

In another case, a cow was found dead with one fore-leg stretched out, one fore-leg bent back under; one hind-leg straight back, one underneath the abdomen. The leg stretched out had a branch of a tree on it, broken, in my opinion, by the same force that killed the cow.

In another case the death was actually witnessed, and here the cow was under an elm tree. The tree was struck and the effect shown from top to bottom. The cow was struck on the poll; the fire had apparently run down the neck as far as the withers, then down the left fore-limb into the ground. In these cases there was no doubt as to the cause of death, it was evident enough; it is in the other cases where such prominent features are absent that the difficulty of diagnosis comes in.

In another claim made on a Company, I was asked to investigate and report. I felt doubtful, and to help me to decide, I applied to the Meteorological Office, and found that no lightning of any kind had been recorded during the whole month in which the animal was said to have been struck. I did not give a certificate that the death of the animal was due to lightning stroke, and the claim fell through.

Post-mortem the animals do not, in my opinion, decompose very rapidly. The death is instantaneous; no ante-mortem changes in the tissues have taken place. The eye presents an open look, not that dull appearance usually shown in death.

P. G. Bond, M.R.C.V.S.

Plymouth, April, 1917.

At the seventh annual autumn show of pedigree shorthorns at the Agricultural Hall, Penrith, on Friday, 19th inst., ninety-nine females sold for £6961 10s., average over £70, and 108 bulls realised £6528 18s., average £60 9s. The highest individual prices were 400 gs. and 260 gs. for bulls, and 200 gs. and 140 gs. (twice) for cows or heifers. These are the highest prices ever recorded at a North of England sale.

THE PREPARATION OF HORSE FODDER.

The preparation of foods is included in the syllabus of examination in hygiene and dietetics prescribed by the Royal College of Veterinary Surgeons; and the examiners for the post-graduate diplomas granted by the Universities of Manchester and Liverpool also demand a knowledge of it from candidates. Students during their course should be shown examples of the various types of apparatus used in mixing and preparing foods that exist on the premises of contractors, railway companies and at municipal depots. Failing such demonstrations, the student has the alternative of studying the subject from the catalogues of makers of this class of machinery, but the benefit derived from this class of study is very poor in comparisod with seeing the actual working and manipulation of the apparatus.

At the present time the public are devoting very much thought to food, and the veterinary profession must not only keep abreast of the knowledge served up in the daily press, but must possess considerable information about foods in excess of that supplied to lay readers.

In passing, the present writer thinks that the Ministry of Food will not have a complete staff until it has one or more veterinary advisers. The feeding of the domesticated animals is of considerable importance and has been the subject of much research; in fact one would be kept very busy, although not very profitably, if all the bulletins and leaflets on experiments connected with feeding issued by agricultural colleges were read. Why veterinary colleges do not issue reports on these matters is an enigma.

The following notes give a description of an elaborate apparatus that was supplied to the Corporation of an English town.

The cost of the apparatus, which included shafting, a 20 h.p. motor, a friction clutch for use with sack hoist, and a dust chamber to prevent dust flying about the premises, was £388 (in 1911). The apparatus was manufactured by Messrs. Bamford, of Uttoxeter.

The hay. This is chopped in an ordinary chaff cutter and is then distributed over a fine perforated sieve, with which is connected a powerful suction fan, whereby all dust, dirt and deleterious matter is extracted, and is conveyed to a dust collecting chamber on the ground floor. The chaff, after being freed from dust and other matter, is conveyed, by means of a revolving inclined spiral conveyor, over a series of sieves of suitable size and a perfectly even sample of chaff is produced.

The danger of breaking the cutter is reduced to a minimum by means of an ingenious stop motion, which throws the cutter out of action immediately it is over fed. The sifter is characterised by an entire absence of shaking riddles, a smooth rotatory motion being employed instead, thus adding considerably to its life and efficiency.

Grain producing machinery. The various grains are put into wooden bins located on the floor in

such a manner that they can be filled with the least amount of labour, and placed opposite to the various mills. Each bin is provided with an elevator of the bucket type which serves its respective mill with the correct quantity of grain.

The mills are of strong construction, fitted with safety springs which obviate the danger of breakage through stones or other hard substances passing between the rollers while in motion.

Three mills—one each for oats beans and maize are, as mentioned above, supplied from their respective bins. Those for oats and maize are of the unequal roller type.

The beans are split in a mill provided with conical kibbling plates and any desired sample may readily be obtained by means of a regulating screw.

On the same floor line as these machines is a bran bin fitted with an agitator, the object of which is to prevent blockage and to ensure a constant and even flow.

Grain mixer. The crushed grains fall from the various mills into a spiral conveyor placed underneath the floor of the room in which the mills are fixed, and on passing from one mill to the other become thoroughly mixed whilst carried along to meet the sifted and cleaned chaff and bran, when the whole fall together into the mixer.

Fodder mixer and bagger. This apparatus completes the cycle of operations. By its aid the chaff, grains, and bran are intimately mixed and from its mouth the fully prepared food is bagged, and if desired also weighed. Through the medium of a two-way flap valve, operations may be carried on without interruption as long as necessrry.

The whole of this plant is put into operation simultaneously, and in the hands of three men, one to attend to the cutting, another the mills, and the third to do the bagging and weighing in the room room below, 26 cwt. of well prepared food can be turned out per hour.

F.R.C.V.S.

ABSTRACTS FROM FOREIGN JOURNALS.

Localised Tetanus treated by Oxidotherapy.

In June, 1917, Belin made a further communication to the Central Society of Veterinary Medicine upon the subject of Oxidotherapy. Since his previous communication in July, 1916 (*V.R.* p. 164, last week) he has continued to employ oxidotherapy in all infectious diseases, whatever their nature, so long as manifestations of toxæmia were present and the affection had no tendency towards a spontaneous recovery. Among the cases he treated thus was one of very serious tetanus.

On Feb. 13, 1917, a horse arrived at one of the centres of evacuation of the French army affected with mange of the head, neck, and anterior part of the body. From the following day the animal presented very marked symptoms of tetanus. He drank with difficulty and was unable to eat. Treatment by oxidotherapy was decided upon, and Potassium permanganate was used for the purpose.

The author has found that the horse supports intra-jugular injections of solutions of this salt in boiled water in the proportions of 2, 3, and 4 to 1000 very well. The one precaution to be taken is to inject the liquid slowly, in small quantities, abruptly expelled from the syringe, in order to save the venous endothelium from the action of the drug as much as possible. Most frequently these injections cause no resistance on the part of the horse. It is necessary to carefully avoid passing the least drop of the solution into the connective tissue; for this produces a voluminous inflammatory lesion, which is not in itself alarming, but is very prejudicial in the case of successive injections. On this account it is advisable to first introduce the needle alone and afterwards unite it to the syringe by means of a rubber tube. After the injection the tube is removed, some drops of blood are allowed to flow from the needle, and then the needle is withdrawn. When successive injections are made each day, lesions of aseptic phlebitis are provoked, but are of slight severity, and recover naturally. This is a rather serious inconvenience, but of little importance when it is a question of saving the life of the animal.

The following is a day-to-day record of the author's case of equine tetanus:—

Feb. 16. The search for the point of entry of the bacillus only revealed a harness wound in the shoulder region. This was perfectly dry, but was nevertheless carefully disinfected. It was not possible to shelter the horse, which had to be tied to a wall and exposed to snow, mud, and severe cold. An intravenous injection of 10 c.c. of a 3 in 1000 solution of potassium permanganate was given.

Feb. 17. 20 c.c. of a solution of the same strength was given. By the evening a slight improvement was manifested; the animal drank well and the membrana nictitans covered less of the eyeball.

Feb. 18. 30 c.c. of the solution injected.

Feb. 19. The dose was raised; 40 c.c. was injected. The horse was clearly better. It was only possible to give him hay and oats, which he ate very well. A provisional shelter could now be had, which protected him from snow, but not from cold and mud.

Feb. 20th, 21st. 50 c.c. was injected each day.

The injections were then discontinued. A phlebitis in the left jugular region, of 4 to 5 centimetres in extent, was observed. At this time the movements of the neck were fairly facile. The mange forced the horse to rub himself, without any appreciable difficulty in doing so. The membrana nictitans now showed no abnormal displacement, the ears had lost their early rigidity, all trismus had disappeared, and mastication and deglutition were executed normally. The only abnormalities that remained were the rigidity of the body and limbs, and a little excitability. The improvement continued on the following days, becoming accentuated, and on March 10 the horse was completely cured.

This result is not less impressing than those which Belin has obtained in his laboratory experiments, in the course of which he succeeded in restoring its normal play to the contracted limb of

a tetanic rabbit by the action of substances profoundly different from the chemical point of view, but having the single common character of oxidising power. It therefore appears that the destruction of the toxins by oxidisation *in vivo* which Belin has demonstrated, is of supreme importance not only in the treatment of tetanus but also in that of infectious diseases in general. Belin will demonstrate this in subsequent notes, when he has collected a sufficient number of facts.

But—and Belin insists especially upon this—it is indispensable to commence with oxido-therapy from the beginning of the illness. The toxins are only oxidised while they are free. Belin has had only two unfortunate results, and both followed on treatment having begun late; in these cases a great quantity of toxins are fixed in the nervous centres, and oxidising agents, like other remedies, are impotent against them—(*Revista de Higiene y Sanidad Pecuarias*).

Hæmorrhage and rupture of the Equine Liver.

Cadeac has published an article upon this question (*Jour. Méd. Vét. et Zoot.*). The action which the toxins elaborated in the course of chronic diseases of the bronchi or lungs exercise upon the hepatic cells and the vessels of the liver is a curious study. A horse which has suffered from strangles and retains a chronic bronchitis as a relic of the former affection is liable to die from a rupture of the liver. Fatty degeneration and amyloid degeneration are produced, and these alterations are the prelude to hæmorrhage and rupture.

When these internal causes have debilitated the liver, mechanical causes or accidental traumatisms produce rupture and hæmorrhage. But, generally, these degenerations are very slow in their evolution; and the affection of the respiratory passages only culminates in the rupture of the liver at the end of many years. The following case is a typical one.

A black entire horse, four years old, contracted strangles and afterwards retained a cough which resisted all treatments that were tried, *viz.*, fumigations, potassium iodide, and arsenical solution. Treatment was not persisted with; because the animal, despite the cough, was very vigorous and did excellent work, did not show the least indisposition, and did not lose a day's work until twelve years old. An accident precipitated his end. An entire horse, which had got loose in the stable, leapt upon this one, compressing him between the fore limbs as in copulation, while the black horse horse struggled to disengage himself. Afterwards the animal refused food and was dull. The temperature was slightly elevated (100·7° F.), the cardiac movements were violent, the extremities cold, and the pulse weak. The alarming symptom of extreme pallor of the mucous membranes, suggesting internal hæmorrhage, was also noticed.

The animal was kept quiet, external revulsive treatment was adopted, and sulphate of soda was given. The next day there was a slight improvement, which persisted till the third day; but on the fourth day the horse died suddenly.

At the post-mortem examination a gush of blood escaped from the abdominal cavity. All the organs were healthy, except the liver: this was considerably hypertrophied, weighed about 90 lb., and appeared voluminous and deformed. Its capsule was ruptured about the anterior aspect of the left lobe in a length of from ten to twelve inches; and the ruptured part was covered with blood-clots and with parenchymatous *débris* reduced to a paplike condition. Other ruptures, less important, were encountered in different portions of the organ.

This observation, according to Cadeac, demonstrates the influence of chronic bronchitis upon the liver, "which frequently undergoes amyloid or granular-fatty degeneration which predispose to its rupture."—(*Revista de Veterinaria Militar.*)

W. R. C.

Royal College of Veterinary Surgeons.

SPECIAL MEETING OF COUNCIL.

A Special Meeting of Council was held at the Royal College on Friday, 19th October, at 4 p.m.

There were present: Messrs. G. A. Banham, W. F. Barrett, W. J. Mulvey, T. S. Price; Prof. E. S. Shave; Mr. H. S. Slocock, and Sir Stewart Stockman.

In the absence of the President Mr. Mulvey was voted to the chair.

The Secretary announced that letters of apology for absence had been received from the President, Dr. Bradley, Messrs. Carter, Coleman, Dunstan, McCall, J. McKinna, Maj.-Gens. Pringle and Thomson, and Mr. Wilson.

The minutes of the previous special meeting were taken as read and confirmed.

Bye-law 61. Mr. Barrett proposed that the addition to Bye-law 61 made at the previous Council meeting be confirmed. Prof. Shave seconded, and on being put to the meeting the resolution was carried. The Bye-law now reads as follows:—

> Bye-law 61. "Every candidate who desires to present himself for the first time for the A or First Professional Examination must, not less than three months before the commencement of the examination, submit to the Council of the Royal College of Veterinary Surgeons a certificate or certificates to the effect that he has passed *a recognised examination in General Education.*"

Bye-law 62a. The proposal to insert after the words "Royal College of Physicians" the words "or a Degree or Diploma in Agriculture granted by a University," was then considered. A letter was read from Mr. Wilson in which he asked whether this meant that a Degree or Diploma granted by a foreign university would be accepted. After discussion, and on the advice of the Solicitor, it was resolved to defer the consideration of the matter in order to allow for the insertion of the words "in the United Kingdom" after the word "University".

This concluded the business of the meeting.

SUBSCRIPTIONS TO R.C.V.S.

The Secretary of the Royal College of Veterinary Surgeons begs to acknowledge the receipt of the following subscriptions for 1917:—

O. S. Broadhurst, Capt. A.V.C.	£1	1	0
S. Chambers, Kirkheaton	1	1	0
E. McSwiney, Cork	1	1	0
L. P. Pugh, T. Lieut. A.V.C.	1	1	0
J. Renfrew, Glasgow	1	1	0
W. Willis, Clapham, S.W.	10	0	0
Previously acknowledged	890	15	0
	£906	10	0

The President B. of A. on the problems of meat and milk supply, 1917-19

The Board of Agriculture have issued copies in pamphlet form of the speech by The Rt. Honble. R. E. Prothero, M.P., President of the Board of Agriculture and Fisheries, at Darlington, on Friday, 5th inst. It is addressed primarily to agriculturists, but it is quite obvious that the veterinary profession, or at least the practitioners concerned in agricultural practice, may assist in translating into practice the policy outlined therein. Probably most of our readers will have seen the address; it has been pretty fully reported in the agricultural and provincial press, but we give almost in full the sections on milk and meat supply. The veterinary profession is but a small wheel in the great machine of the State—it is young, it is numerically small, it is poor, but it is a valuable portion of the great—and to us, vital—industry of agriculture. How valuable it is is better understood by the governments of the oversea Dominions and of India than it is by our own.

The Milk Problem.

If the milk is short it means that the child life of this country is in peril. There are thousands of parents who won't mind going short of a bit of food themselves, but who cannot bear to see their children suffer. I would ask the dairy farmers all over the country to stick to their milk production. I know well enough that the labour difficulties of this branch of the industry are greater than in any other branch of it, but none the less Stick to it—in the dogged spirit of the men who are fighting for us by sea and land. I know that farmers who were under contract to supply fixed quantities of milk were losing during the winter of 1916-17 on the prices settled by the Board of Trade. It is impossible to fix one uniform rate which shall be fair to all. I have seen figures which show 18 varieties of the actual cost of milk production; 58 per cent. were at or below a certain figure, 42 per cent. were above it in varying degrees. If a price is fixed which gives a profit to 58 per cent., 42 per cent. will lose money. But there is one point which we must always bear in mind; the only fair way to calculate costs is to take the year as a whole, and to set off the higher expenses of the winter against the comparative cheapness of the summer months.

I think that something has been done to help milk producers. The Calf Order has been taken off in the interest of dairy farmers. It had for the time done its work. Then April this year was a bad month; grass was scarce. We made April a winter month, so that dairy farmers might get the benefit of winter prices as a set-off to the shortage of keep. Then the Food Controller promised that winter price for 1917-18 should not be fixed below 1s. 8d. the gallon. The recent Milk Order more than redeems that promise. Finally, the Food Controller is trying, and I hope he will succeed, to bring down the prices of feeding stuffs, and to secure to dairy farmers the first call on the scanty supplies which will be available.

But I should like to add that dairy farmers who have some portion of their land under the plough will be better off than those who have none. They can at least raise some portion of their winter cattle food for themselves.

Economies.

The only changes of method which will do any good are either to economise in food without reducing the yield of milk or to increase the yield per cow. In war time to do one or the other is a duty. Seventy per cent. of the cost of milk, production is spent on food, and about half of this goes in purchased foods. But some men spend more than others; they maintain a generous margin of safety. Thus, on five North Yorkshire dairy farms the difference between the highest and lowest in the daily cost of feeding cows was 5d. per cow, or, if the cow produced two gallons a day, 2½d. per gallon. Now if at £19 per ton every pound of cake you can save a day means with a two-gallon cow a reduction of 1d. a gallon a day, it pays to economise as long as you do not reduce yields. Any man can get his rations revised by experts at the local Agricutural College or at the Board of Agriculture. Best of all, he might perhaps—in war-time—induce a neighbour who has spared rations with success to give him a wrinkle.

Skilful feeding, then, is one remedy; the other is to get rid of inferior cows. I don't advise this, unless you can replace them with better. But it is all-important to know what your cows are doing. On the five North Yorkshire dairy farms to which I alluded, the annual yield per cow varied from 315 gallons to 1314 gallons. Put that into money. At 1s. 5d. per gallon it is the difference between £22 6s. 3d. and £93 1s. 6d. Of course, that is an exceptionally high yield. But while 20 per cent. of the cows were yielding over 900 gallons a year, 20 per cent. yielded under 500, and at 1s. 8d. a gallon would not be paying their way. That shows the value of milk records. I may add that heifers and second-calf cows are omitted from these figures.

Meat Production.

At the outset, let me say that I do not intend to discuss the question of prices. A member of the Government ought not to criticise in public the actions of colleagues. Therefore, I feel bound to say nothing. I regret this the more because I have plenty to say which I want to say, and, perhaps, for my own reputation ought say, and because I know that the question is of all others the most burning one for farmers at the present moment, and one which seriously affects their whole attitude towards increased production. (Cheers). But I have made up my mind. My own business is not the price of food but food itself.

There is one point which I am, I think, obliged to make. It is stated that the Food Controller's prices are part of the agricultural policy of the Government; that they are intended to divert farmers from cattle to corn, and that they, therefore, deliberately aim at reducing the live-stock of the country by making meat production unremunerative. That is a complete error. It is quite true that, some months ago, the Board warned farmers that the head of cattle would have to be reduced. But there were two practical reasons for this warning. First, we knew that we were unlikely to be able to import much more than half the usual quantity of feeding stuffs. To put that statement into figures, our live-stock normally consume 11,250,000 tons of concentrated food. This year we shall probably have only 6,000,000 tons, the greater part of which must be devoted to dairy cattle. Secondly, we knew that we should be obliged in the autumn and early winter of this year to begin to draw on our capital, and slaughter some 150,000 cattle for army beef.

Neither of those reasons are matters of policy; they are facts arising out of the war; they show, what it is hard for some of us to realise, that we are actually fight-

ing for our lives. We are only too well aware of the probable shortage of meat supplies during and after the war. So far from wishing to reduce live-stock, the Government is anxious to maintain and, if it were possible to feed them—to increase their numbers. But the two reasons I have given you show this to be absolutely impossible.

Neither is it true, nor in the remotest degree credible, that the low scale of prices fixed by the Food Controller from January onwards is designed by the Government to stimulate corn production. It is quite plain that a price of 60s. per cwt. live-weight for stall-fed cattle must, in present circumstances, tend entirely in the opposite direction. It puts a premium on grass as the cheapest form of cattle feeding; it penalises stall-feeding on arable farms, and so tends to diminish the supply of manure without which it is impossible to carry on arable farming with success.

What the Public do not realise.

The conditions under which farmers fatten cattle on arable land—and it is on them that we rely for our winter meat—are, as I think, widely misunderstood. I am convinced that at current prices—I have gone into the figures closely—arable farmers who still feed and fatten cattle for the winter markets have only made and could only make small profits, if they made any direct profits at all. (Hear, hear). The charge of profiteering is absolutely absurd—both before and during the war. (Cheers). "That is all very well," it may be said, "but farmers get their manure, and at present prices for corn that is worth a tremendous lot." Wheat at 72s. per 480 lb. and barley and oats in proportion are paying crops, if the yield per acre is high, and if the grain can be harvested cheaply and in good condition. Much turns on those "ifs." (Hear, hear, and laughter). I very much doubt whether the average yield per acre this year will be high. I am very certain that the harvest in most parts of the country has been extremely expensive, and that a considerable part of the grain has been lost or damaged.

Do people, I wonder, realise the extra cost of cutting corn which has been flattened by rain and twisted by wind? Do they recognise how much a man is out of pocket if he has to bring his men and horses into the field day after day, and send them home after waiting for hours because it is raining? Do they consider that, this year, after the corn has been gathered into sheaves, it has often been necessary to scatter the sheaves again, and even to untie them, in order to give it a chance of drying? Do they think of the quantities of seed that has been shaken out of the ear and lost, or the amount of corn that is damaged or sprouted? If they thought of all the money lost by these misfortunes I do not think that they would attach any exceptional value to farmyard manure on the score of high profits realised on growing corn in a season like that through which we have just passed.

The Present Position.

Meanwhile the position is deplorable, and may soon become serious. My Advisory Committee, consisting of some of the most experienced farmers in the country, one of whom I am glad to see behind me to-day, have put the farmers' case before me. And, as I understand it, it is this:—

He is willing in the national interest to produce winter beef at the lowest rate of profit which will save him from pecuniary loss, provided that distributors are treated in the same way.

He strongly objects, however, to the demand that he should pay money out of his own pocket in order that other sections of the community may pay less for their meat than it costs to produce (cheers)—and he bitterly resents the attempt to enforce that demand by a campaign of abuse to set public opinion against him (cheers).

The result is that in many parts of the country, preparations for winter feeding are entirely suspended; neither cake nor stores are bought. Meanwhile time is rapidly passing. Without any complications of this sort, the meat situation is sufficiently serious to need careful handling. You can alter wages or prices with a stroke of the pen, but it takes at least three years to produce finished cattle, and at least three years to remedy a mistake. (Hear, hear.) In war-time figures are dangerous. I can, therefore, only put the position to you in a general way.

Winter Feeding.

As I have already said, we cannot import enough concentrated food to enable farmers to finish cattle as they usually do. At the same time, we have been obliged to make an extra draft on home supplies for Army beef. These are two of the consequences of war. They are facts which we cannot alter. They are not questions of Government policy. The only point which repays discussion is what is to be done to meet the special circumstances created by the war. A hundred and fifty years ago winter-feeding was unknown. Cattle, fattened on summer grass, were slaughtered in the autumn, and people lived in the winter on dried or salted beef. With the introduction of roots, winter-feeding became possible. The roast beef of an Old English Christmas was produced from the three-year-old cattle, fattened slowly on roots, hay, and straw. The discovery of concentrated foods made two changes; it enabled farmers to fatten younger animals, and to do it more rapidly. This is the most economical method of producing winter beef. But to-day, from want of cake that method is impossible. It is very doubtful whether two-year-old cattle can be fattened without cake, and three-year-olds are scarce. What then is to be done? In normal times we ate 45,500,000 lb. of beef a week, of which 38 per cent. was imported. We cannot now reckon on more than half this supply from abroad. Thus the demand made upon home-grown beef is increased, and, at the same time, our means of producing it are diminished. This is where the difficulty arises. We can only command one half of the normal supply of concentrated foods. The dispute as to the gain or loss on three-quarter fattening does not arise here, because we shall not have the food with which to finish. We have to meet an emergency, and I believe the best way to do so is to aim at bringing a large number of cattle to eatable condition, and not to finish a few highly. Now there is evidence to show that two-year-old cattle will put on about 1 lb. a day in weight if they are for, say, 20 weeks on a ration of roots, hay, and straw, provided that they receive in addition a daily allowance of 1 lb. of cake, when roots are good, or of 2 lb. when roots are poor. We know that on September 4 we had in the United Kingdom a certain number of cattle of two years old and upwards, excluding milking cows, bulls, and other animals, which are, for various reasons, not available for slaughter. We believe that there will be sufficient cake to allow a ration of 1½ lb. a day to these cattle. Thus fed for 20 weeks they will not be fat in the ordinary sense of the word; they will not be prime beef. But, though they weigh less, they will yield, as has been proved by experience, a fair proportion of eatable meat. (Hear, hear.)

Three Alternatives.

Now, taking all the two-year-old cattle available on September 4, allowing for their reduced weight, and adding the usual number of cows drafted from the dairy herds, we shall be able to supply the 45,500,000 lb. of

beef normally consumed per week to within a measureable distance of the time when cattle again begin to come off the summer grass. But in May and June, 1918, the supply will run short unless we adopt one of three alternatives.

The first is dangerous. It is to slaughter an increased number of cows and heifers or veal calves.

The second alternative is to import more beef. In that matter we are not our own masters.

The third alternative is to reduce consumption. That is really the only one of the three which is safe and within our own control. There is one important point arising out of what I have just said which I should have liked to discuss at length. But time presses. It is the question whether the manure made by cattle fed on the lines suggested above will be so inferior in quantity and quality as to impair the fertility of the land, and consequently diminish corn production in 1919. On the whole the answer is reassuring. The quantity of manure made from the beginning of October, 1917, to the end of June, 1918, will not fall below seven-eighths of that normally produced from fattening cattle. The quality will to a certain extent suffer. The percentage of organic matter, on which depends the permanent increase of fertilily, remains the same. But the lower ration of cake will rob the manure of at least half the ammonia which produces the immediate results. Fortunately for us, we shall be able to command a greatly increased quantity of sulphate of ammonia to compensate this loss.

The sheep position is more serious. We have had a disastrous lambing season; the imports of frozen mutton will probably be reduced; and there will be little cake available for winter feeding. All I can advise farmers to do is to winter their young sheep as cheaply as possible, and to reserve what cake or corn they can get for their older sheep, which will reach an eatable condition on roots and hay and very little cake or corn. The sheep stocks of the country will be low for the next year or two. As to the pig situation, I need say little. It is like that of cattle and sheep; it is somewhat eased by the quantity of diseased potatoes and of damaged corn in the country.

Reduced consumption of Meat a necessity.

I have put the facts before you in a broad and general way, and it results in this. If the consumption of meat continues at the present rate the position may undoubtedly become dangerous. I am confident, however, that if the present difficulty over meat prices is satisfactorily met, farmers as a whole will do their utmost, in the nation's interest, not only to increase supplies of corn, but to maintain those of milk and meat. So the new agricultural year opens with a louder and a more insistent call for added effort and increased self-sacrifice. On the ploughing, sowing, and feeding of the next few months depend our home-grown supplies of bread and meat for 1918.

As a nation we are fighting for life. Men, munitions, money, time are certainly on our side. Only food is doubtful. Remember what a shortage means. Hunger is hard to bear. It turns strength to weakness; it saps endurance; it starves courage; it breeds discontent, suspicion, bitterness. If the war last it might even force us to admit defeat, and sacrifice that freedom and lasting peace which complete victory would secure. If the war has ended it may rob us of the patience and moderation which are essential to prudent action, and embitter, beyond conciliation, the problems that peace will at once present on every side of our national life.

REVIEW.

Veterinary Obstetrics. By W. L. Williams, Professor of Obstetrics and Research Professor in the Diseases of Breeding Cattle in the New York State Veterinary College at Cornell University. Pp. xiv. + 637 (including index), with three coloured plates and 140 illustrations in the text. (Published by the Author, Ithaca, N.Y., 1917.)

In 1909, Prof. Williams published a work in which obstetrics, the diseases of the genital organs, and those of newly-born animals, were included in a single volume. Subsequent advances in our knowledge of these fields led to the recognition of a much closer interdependence between them than was realised in 1909; and thus it became necessary to recast the work from an entirely new standpoint. Accordingly, in the author's words, "it has been decided to prepare a new volume upon obstetrics and a companion volume upon the diseases of the genital organs, including those diseases of the young animal transmitted from mother to young *in utero*, or through the milk." The book now to hand is the first of the two volumes, and should be considered, not as a revision of part of the 1909 volume, but as a new work.

In this volume of 630 pages of literary matter a wide field is covered. Obstetric anatomy and physiology are first dealt with; and here many may think that too much space has been accorded to embryology. Certainly more embryological detail has been included than is required by a clinician using the book simply as a guide in his practice; but there is something to be said for treating the subject at some length in any obstetrical text-book. Pregnancy naturally comes next, followed by some half-dozen pages upon the hygiene of pregnant animals, and then by about 70 pages upon the diseases of pregnant animals, and those of the fœtus and its membranes. Physiological parturition is then fully dealt with, after which comes the important subject of dystokia. This section, which altogether somewhat exceeds 200 pages, is divided into three main portions—the first upon equipment, general management of parturition cases, and obstetric operations; the second and third deal respectively with maternal and fœtal dystokia. The last three sections of the work deal with wounds and injuries of the genital organs; puerperal infections; and puerperal eclamptic diseases, all of which are well handled in the space of between 80 and 90 pages.

So comprehensive a work can only be reviewed broadly; and it may be said at once that the book, while containing much controversial matter, will be very valuable to all veterinarians practising in breeding districts. The author often challenges generally accepted views; but when his controversial opinions are closely examined, it will be found that solid reasons are adduced on behalf of most of them. The book possesses two outstanding merits. The first is the attention given to the practical details of parturition work, of the difficulties of which the author has evidently had great experience. Full directions are given regarding all the various manipulations; and, though no written account of these subjects can ever be wholly satisfactory, this one strikes us as altogether admirable. An instance of this feature in the work is the amount of space devoted to the consideration of obstetrical equipment, and especially to the very debateable question of the merits of different parturition instruments. A great variety of the latter are figured, described, and critically discussed; and the author's views regarding them are valuable. Like most skilled veterinary obstetricians, he has been led by experience to simplify his equipment, but he still uses more instruments than some English practitioners.

The second special merit of the book is its constant attempt to trace out the anatomical and physiological causes upon which obstetric troubles depend; and here the practitioner will find the work exceedingly stimu-

lating and suggestive. The sections upon such hitherto little-mentioned subjects as rupture of the pre-pubian tendon and bi-cornual pregnancy are instances of this. In this connection an important feature of the work is its insistence on the intimate relation between diseases of the genital organs and difficulties in parturition; and here the section upon the dystokia of contagious abortion—the latter term being used in its widest sense to include abortions due not only to Bang's bacillus but also to other microbial infections—is perhaps the best example of the trend of the author's teaching. It will not be universally accepted; but no one will be able to read the book without being forced to re-examine his views upon many obstetric questions.

The numerous illustrations, which are both well chosen and well executed, add much to the value of the work. Altogether it may be fairly said that this is one of the comparatively few books which the country practitioner ought to possess.

W.R.C.

Veterinary Surgeon honoured.

Mr. Henry Turner, of the Old Rectory, Puttenham, Tring, was, on Thursday, 11th inst, admitted to the freedom and livery of the City of London in the Worshipful Company of Felt-makers, in recognition of his distinguished services in the railway world. Mr. Turner was presented with the freedom and livery in the historic London Guildhall, and had as his colleagues the Right Hon. Baron Colwyn, and Sir W. Middlebrook, M.P. Major Richard Trigg, T.D., and Alderman Sir Louis A. Newton, Senior Sheriff of the City, acted as Mr. Turner's sponsors.

Major Rigg, who is the Upper Warden of the Company, proposed the election of Mr. Turner, and in the course of his remarks, said :—"Mr. Henry Turner was born at Dudley it 1859, being the son of Mr. John Turner, colliery proprietor. He was educated at St. Thomas' School, Dudley, and afterwards by private tutor. In 1876 he became a pupil, and afterwards an assistant, to the late Mr. Harry Olver, F.R.C.V.S., of Tamworth. In 1880 he was engaged as assistant to the late Professor Pritchard, Professor at the Royal College of Veterinary Surgeons, London. He was placed by Professor Pritchard in the service of the Midland Railway Company in London, and in 1881 was transferred to the L. and N. W. Railway Co. Mr. Turner acted as assistant to the late Capt. Barthorp, upon whose retirement in 1095, he attained the premier position as Superintendent of the horse department, which post he still occupies. It is the largest department of the kind on any of the huge railway systems, and he was justly acknowledged as one of the leading officials and organisers in the great railway world."

Mr. Turner, in his reply, thanked Major Rigg and Alderman Sir Louis Newton for having respectively proposed and seconded him, and expressed his deep gratitude to the members for having unanimously elected him to the freedom and livery of the Mother City of the Empire. The history of the City Guilds and the Corporation of London was largely the history of England; the interests of both were closely interwoven, for they had always been strenuous upholders of liberty. The Guilds had a glorious record—they had done their part in the City and at the front in the present war—and in the reconstruction which must follow the war they would be expected to take their full share in reviving and stimulating in their various crafts that increased production, which was recognised, without distinction of party, as a national necessity. In thanking them for the compliment they had paid him, he assured them he should ever endeavour to merit their confidence.—*The Bucks Herald.*

ARMY VETERINARY SERVICE

Extracts from *London Gazette*,

WAR OFFICE, WHITEHALL, Oct. 18.

REGULAR FORCES. ARMY VETERINARY CORPS.

The notification in the *Gazette* of Sept. 11, regarding temp. Capt. A. C. Jagger is cancelled.

Temp. Lieut. to be temp. Capt :—W. R. Kennedy, (July 3).

Oct. 22.

Temp. Capt. T. F. Hotchkis relinquishes his commn. on on acct. of ill-health contracted on active service, and is granted the hon. rank of Capt. (Oct. 10).

Oct. 23.

The notification in *Gazette* of Sept. 1 regarding the following Capts. (T.F.) is cancelled :—A. W. Reid, J. S. Bowden, P. Abson, A. N. Foster, J. H. Wright.

Temp. Lt. to be temp. Capt. :—W. G. Burndred (Oct. 9).

CANADIAN A.V.C.

Temp. Capt. S. C. Richards to be actg. Maj. while spec empld. (Aug. 25).

TERRITORIAL FORCE, ARMY VETERINARY CORPS.

Oct. 20.

Capt. (actg. Maj.) A. W. Reid, F.R.C.V.S., relinquishes the temp. rank of Maj. on ceasing to be employed as D.A.D.V.S. (Sept. 18).

Capt. W. Stothert to be actg. Maj. whilst employed as D.A.D.V.S. (Sept. 18).

Oct. 24.

Capt. R. B. Palmer to be actg. Maj. whilst comdg. a Veterinary Hospital (Aug. 24).

The following casualty is reported :—

DIED—Pte. E. E. Setchfield, 7275 (New Walsoken).

OBITUARY.

WILLIAM CLEOPHAS BARLING, M.R.C.V.S., Newnham, Glos. Graduated, Lond: April, 1868.

Mr. Barling died on Sunday night, 14th inst., at his residence, The Paddocks, Newnham, after a long illness. He was the son of Mr. William Barling, of Blythe Court, Newnham. He carried on an extensive business as a veterinary surgeon and farmer. He was also a large exporter of horses to the Continent. He was joint hon. secretary to the Belgian Relief Committe. Deceased's only son, Lieut. Bingham Barling, was killed in action early in the war. At the funeral at Newnham, on Wednesday, were Mrs. W. C. Barling, widow; Mrs. G. H. Oxley and the Misses Freda and Lucy Barling, daughters; Mr. J. L. Barling, Hereford, who also represented Mr. Fred W. Barling, Bartestree Court; Mr. F. Barling, Birmingham; Col. G. Barling, C.B., Blythe Court, Birmingham; and Mr. Macdonald, the deceased gentleman's assistant. Six workmen on the estate acted as bearers. A large company attended the funeral, and beautiful wreaths were sent by relatives and friends.

JOHN BLAKEWAY, F.R.C.V.S., Chaddesley-Corbett, Kidderminster. Lond: April, 1885; July, 1892.

Mr. Blakeway was on the Board of Examiners for the Membership since 1901. He had retired from his practice in Birmingham about 11 years ago, and returned to Chaddesley-Corbett, with which parish his family has long been associated. He was among the first to take up service on the outbreak of war, joined the British Remount

Commission, and had three years service in Canada, U.S.A., and Spain. Mrs. Blakeway accompanied him on his last visit to America. A few months back he sent us four picturesque half-plate photos. of one of the collecting camps, which, in better times, we should have reproduced for our readers.

He returned to England on Sept. 5, and was granted the rank of Capt. A.V.C. A few weeks after his return he had an accident—a fall, and had been under medical care for three weeks for difficulty in breathing which had supervened, and died suddenly in his chair on Thursday, 18th inst. His age was 52.

His two sons joined up at the outbreak of war, and have seen active service in various parts.

J. WILLIAM COE, F.R.V.C.S., Major A.V.C. (T.F.), *T.D.*, Stoke-on-Trent. Lond: May, 1889; Dec. 1901.

News has been received of the death of Major Coe, in a hospital at Rouen, on Saturday last. It was known some weeks back that he had been seriously injured by a fall from his horse. He was a well known and popular man amongst his confrères in the Midlands, and his loss is very generally regretted.

GOOCH.—On October 20th, at St. Martin's, Stamford, Constance Jane Gooch, the beloved wife of Fredk. Leeds Gooch, F.R.C.V.S., aged 54 years.

Alleged milk adulteration—dismissed.

At Athy Petty Sessions, on Tuesday, 16th inst., before Col. Barry, Messrs. Thomas Plowman and J. C. Ryan, Sergt. Hoffman, Inspector of Foods and Drugs, summoned Patrick Mullery, William Street, for alleged adulteration of milk.

Complainant stated that on September 7th he purchased a sample of milk at defendant's place, which he sent for analysis in the usual way. The certificate of Sir Charles Cameron stated that the analysis showed 6.25 per cent. of water had been added as an adulterant. The milk contained 8 per cent. of non fatty solids, and 3.1 of fats. The poorest milk contains 11.1 per cent. of non-fatty solids.

Dr. Monks (for the defence): He took the sample about 8 o'clock in the morning from Mrs. Mullery, who was in the shop. There were about six pints in the vessel from which the sample was taken.

Mary Dooley stated that between 7.30 and a quarter to 8 o'clock on the morning of the 12th ult. she went to Mullery's for milk. Mrs. Mullery told her there was no milk in, but that Thomas Walsh, an employe, was milking the cows. She went to the place near by where he was milking and brought the small quantity which he had milked out to the shop where it was strained, and she was served with 1½ pints. The milk was not interfered with. Thomas Walsh made the remark when she was taking the milk that it was not fit, as he had not the cow finished, and witness said she wanted the milk in a hurry as she was going out to work.

By Sergt. Hoffman: She was sure the vessel in which she got the milk was empty.

Thomas Walsh stated that he was twelve years in defendant's employment. When Mrs. Dooley came he told her to wait until he had milked the cow out, as he did not wish to give her the "fore" milk.

Miss Lizzie Mullery was also examined to prove that there was no interference with the milk. Answering Sergt. Hoffman, said she was about five or six months in the trade and had no complaints from customers.

Mr. John Holland, V.S., said he examined the cow from which the milk was taken. It was a healthy-looking animal. He took samples of the milk morning and evening. Experience showed that the evening milk was much richer than the morning milk, and the cream richer.

Mr. Ryan: What has this got to do with the case?

Dr. Monks: In your experience is it a fact that the morning milk is generally a weaker milk?—Yes, ½ to 1 per cent.

Would the character of the milk as described in the the analysis be consistent with this milk taken from the cow in the morning?—Yes, I should say so. If the whole of the milk had been taken from the cow there would be at least 11.5 of solids.

Mr. Ryan: This is a case of added water?—Yes, but it is a percentage. I would prefer to be on the other side of this case if I thought there was anything wrong. I would be as severe as anyone would be in that case.

Dr. Monk: It is a fair milk, and only such a milk would contain less fats than an entire milk?—Decidedly, as there is 1 per cent. of fats over the standard required.

Replying to the Police, witness said that the analyst weighed the bulk and then extracted the solids from that. The remainder got credit as water. The system is wrong and the Co. Court Judge agreed with that view, and the law should be altered. The Court of Appeal in England held the same view.

Sergt. Hoffman: By a majority.

Mr. Ryan: Do you contradict the certificate issued by Sir Charles Cameron?—I would not be such a fool.

Your evidence is that you are not prepared to say there was not any added water?—It would be impossible for me to do so, but I am convinced there was not.

Are you prepared to say that the sample taken by the police was not adulterated with water?—It would be impossible for me to say so.

A sample of milk was submitted for analysis to Sir Charles Cameron, and he certifies that it is adulterated with 6.25 of added water. Are you prepared to contradict that?—I could not do so, but I disbelieve it.

Why?—I disagree with the law on this matter.

A great many disagree with some laws?—The County Court Judge agrees with me. If the police got fore milk it would be a very unfair analysis.

Mr. Ryan: I do not think you have any right to express an opinion on Sir Charles Cameron's opinion. You say he is an expert, and I take it you are not.—Perhaps I know a little more than you imagine.

I do not question your knowledge, but I take it you are not an expert.—I had some work of that kind to do in Glasgow.

Are you an analyst or not?—No.

You are a Veterinary Surgeon. How then can you contradict the certificate?—I have one or two diplomas that allow me in this matter to have added knowledge as veterinary surgeon.

Do they give you any authority to contradict this certificate?

Dr. Monks: Did you intend, or is your evidence purporting to contradict the certificate of Sir Charles Cameron?—Decidedly not.

You are not attempting to contradict the accuracy of the certificate?—No.

Is the sample of milk which was analysed consistent with milk that might have come from the cow without adulteration?—Decidedly.

Mr. Ryan: How can you say that?—I can if it was fore milk.

Dr. Monks: There is no contradiction of Sir Charles Cameron, and I do not want the case confused.

Mr. Ryan said the sooner Sir Charles Cameron was put on the witness table in this class of case the better. It would clear up many cases if he was asked about the added water in milk. He (Mr. Ryan) was not satisfied about it.

Dr. Monks: None of us are satisfied with the law as it stands.

Mr. Ryan: I agree. None of the magistrates are.

Dr. Monks: But you must accept the law as it stands whether it pleases or not. Addressing the Bench, Dr. Monks said this case had been acted upon by the County Court Judge in a similar prosecution, who held that milk as it comes from the cow if sold in that state carries no liability for the quality, and has complied with the Section of the Act. What the magistrates had to consider was—are they satisfied on the evidence that has been given that the milk supplied to the police is milk as it actually came from the cow. If the bench were so satisfied, then they could dismiss the case. Having referred to the fact that the witnesses were impartial and that there were no previous prosecutions against the defendant, Dr. Monks said he was not questioning the accuracy of the certificate. Mr. Holland had considerable experience, and his evidence was invariably accepted in these cases. He swore that being the morning milk and the fore milk it was perfectly consistent with the evidence, and the fact that it was sold as it came from the cow. If they believed the milk was not tampered with he was entitled to a dismiss.

Colonel Barry: How does the added water come in if there is no deficiency in fats?

Mr. Holland: The solids are weighed. If the solids are less than they ought to be the water gets credit for the rest.

Colonel Barry: From my experience I know "pourings" is very poor milk.

Mr. Ryan said the case of Hunt and Richards in the English Court of Appeal had practically nullified the administration of this Act, and everyone would be glad to see the law set right. The magistrates had decided to dismiss this case on the ground that the evidence produced shows that the milk was sold as it came from the cow. With regard to the second point in the case, the question of the analyst's certificate, it shows that the milk contained a certain percentage of added water, as an adulterant, and no evidence produced there had altered his opinion. The difference between morning and evening milk was well known public knowledge. That did not alter the fact that the analyst's certificate showed that there was added water. To show that there was not added water, the only thing to do was to produce a counter analyst's certificate, or produce him to explain his analysis. Mr. Holland was well known by reputation, and they all had the greatest respect for him, but he was not an analyst. The magistrates would be very glad if an analyst was put on the witness table some day in order to have him examined and cross-examined on his analysis. It might clear the air.—*The Nationalist and Leinster Times.*

The protective functions of the Skin.

The skin as a whole may be regarded as an organ with a common and complete function of its own, to which view testimony is borne by the complete way in which it suffers in certain infectious diseases, such as scarlatina and variola; and it is precisely these infections in which the skin plays a large part that permanent or nearly lifelong immunity results. Professor B. Bloch, head of the dermatological clinic in Zurich, discusses some of these immunity problems in relation to the skin in the *Correspondenz-Blatt für Schweizer Aerzte* for August 4th. He notes how seldom general paralysis or tabes is associated with a cutaneous gumma in the same patient and how rare it is to see these late parasyphilides at all in countries where, in consequence of defective treatment, severe tertiary lesions are common in the skin. He quotes the statistics of Mattauschek and Pilcz to confirm the relative infrequency of tabes in patients with early abundant cutaneous evolvement. Taken together these and similar observations lead Dr. Bloch to lay great stress on the allergic function of the skin—its reaction to an unwelcome intrusion of which it has once had experience. The classical researches of Richet, v. Pirquet, and Römer have shown how the cutaneous manifestations of tubercle are influenced by this function of allergy which regulates their clinical course as well as the anatomical structure of the tuberculous nodule itself. Cutaneous tuberculides are nothing else but the reaction of the forewarned skin of the chronic consumptive to any isolated bacilli brought by the blood stream.

Historically it has been from studies of the skin—beginning with Jenner's vaccination and Koch's fundamental experiment of tubercle inoculation in the guinea-pig—that most light has been thrown on problems of immunity. Due in part to the fact that the skin is so favourably situated for exact observation, the fact probably remains that it is to the external covering of the body which we must look for the most important processes of immunisation. The struggle against attacking microbes from without has slowly adapted the skin and given it the ability to react against the parasites themselves, as well as their toxins with the process which we now know as allergic inflammation. This function has been gradually acquired in the history of the race and of the individual, since neither the skin of the lower animal nor of the new-born child reacts in at all the same way as that of the human adult.—*Brit: Med: Jour.*

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered.
GT. BRITAIN. Week ended Oct. 13		4	4			1	1	20	33	9	31	13
Corresponding week in	1916 ...	11	12				5	15	24	2	58	34
	1915 ...	9	9					16	27		61	228
	1914 ...	11	13								112	1181
Total for 41 weeks, 1917		353	402			23	42	1923	3806	415	1849	801
Corresponding period in	1916 ...	419	493	1	24	43	110	1784	4015	199	3651	8839
	1915 ...	455	517			40	71	660	1418	164	3269	14273
	1914 ...	579	636	22	108	82	250	1530	2642	155	3384	32941

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.

(a) Confirmed. (b) Reported by Local Authorities.

† Counties affected, animals attacked:—Stafford 1

Board of Agriculture and Fisheries, Oct. 16, 1917

Excluding outbreaks in army horses.

DISEASES OF ANIMALS ACTS 1894 TO 1914, SUMMARY OF RETURNS.

Period.		Anthrax		Foot-and-Mouth Disease.		Glanders.†		Parasitic Mange. ‡		Sheep Scab.	Swine Fever.	
		Out-breaks (a)	Animals.	Out-breaks (a)	Animals.	Out-breaks (b)	Animals.	Out-breaks (b)	Animals.	(b)	Out-breaks (a)	Slaughtered. *
GT. BRITAIN. Week ended Oct. 20		6	8			1	1	28	41	2	14	11
Corresponding week in	1916 ...	7	7				1	20	29	2	54	20
	1915 ...	1	3			1	1	10	29	1	61	302
	1914 ...	15	16			1	5				126	1108
Total for 42 weeks, 1917		359	411			24	43	2021	3847	417	1863	812
Corresponding period in	1916 ...	426	500	1	24	43	111	1804	4044	201	3705	8859
	1915 ...	456	520			41	72	670	1447	165	3330	14575
	1914 ...	594	652	22	108	83	255	1530	2642	155	3510	34049

‡ The Parasitic Mange Order of 1911 was suspended from 6th August, 1914, to 27th March, 1915, inclusive.
(a) Confirmed. (b) Reported by Local Authorities. † Counties affected, animals attacked :—Merioneth 1
Board of Agriculture and Fisheries, Oct. 23, 1917 Excluding outbreaks in army horses.

THE PRESENT CRITICISM OF THE A.V.D.

Sir,—However untrue or otherwise the allegations at present being levelled against the A.V.D. and its personnel, the remedy to prevent a recurrence is obvious.

Give the young graduates a chance, and in selecting for administrative posts, or command of hospitals, judge on merit, and not as at present on age, or length of service, or years of qualification.

If this was carried out no complaints would be made.

I enclose my card.—Yours faithfully,

OBSERVER.

Veterinary Societies—Addresses.

BORDER COUNTIES V.M.S.
Pres: Mr. H. Barrow, M.R.C.V.S., Ireby, Carlisle
Hon. Sec: Mr. R. Craig Robinson, M.R.C.V.S., Carlisle
Meetings, Second Friday of Feb., June, and October

GLASGOW V.M.S.
Hon. Sec. Mr. John S. Keane, 11 Falkland Mansions, Kelvinside

ROYAL VETERINARY COLLEGE V.M.A.
Pres. Capt J. T. Edwards, B.SC., M.R.C.V.S.
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